

What is claimed is:

1. An exhaust-gas purifying apparatus, comprising:

an outer cylinder;

a plurality of cylinder-shaped supports disposed in the outer cylinder, and having an outer peripheral surface and an inner peripheral surface, at least two of the neighboring cylinder-shaped supports contacting with each other with the outer peripheral surfaces; and

a catalytic layer loaded on at least one of the outer peripheral surface and inner peripheral surface of the cylinder-shaped supports;

wherein at least one of the cylinder-shaped supports has a ring-shaped cross-section with a cut-off, and is disposed in the outer cylinder in such an elastically deformed state that it expands in the centrifugal direction.

2. The exhaust-gas purifying apparatus set forth in claim 1, wherein the ring-shaped cross-section with a cut-off is a letter "C"-shaped cross-section.

3. The exhaust-gas purifying apparatus set forth in claim 1, wherein the cylinder-shaped supports are bonded with each other at the contacting outer peripheral surfaces.

4. The exhaust-gas purifying apparatus set forth in claim 1, wherein the cylinder-shaped supports contact with an inner peripheral surface of the outer cylinder with the outer peripheral

surfaces, and are bonded to the outer cylinder at the contacting outer peripheral surfaces.

5. The exhaust-gas purifying apparatus set forth in claim 1, the outer cylinder and the cylinder-shaped supports are metallic.

6. The exhaust-gas purifying apparatus set forth in claim 5, wherein the cylinder-shaped supports are formed of a perforated steel plate having a plurality of through holes.

7. The exhaust-gas purifying apparatus set forth in claim 1, wherein the cylinder-shaped supports are combined into a plurality of groups, and the groups are disposed in the outer cylinder at predetermined intervals in the axial direction of the outer cylinder.

8. The exhaust-gas purifying apparatus set forth in claim 7, wherein the groups of the cylinder-shaped supports are disposed out of phase.

9. The exhaust-gas purifying apparatus set forth in claim 1, wherein the cut-off is continuous from one of the axial opposite ends of at least one of the cylinder-shaped supports to the other one of the axial opposite ends thereof.

10. The exhaust-gas purifying apparatus set forth in claim 1, wherein the outer cylinder is an exhaust pipe.